

AMENDMENTS TO THE DRAWINGS

In all of the figures, the cross-hatched lines in some layers are removed as shown in the Replacement Sheets. In FIG. 3D and FIG. 3E, labels 32, 33, 34, 35 and 36 are added. In FIG. 4, labels 42, 43, 44, 45 and 46 are added.

Attachment: Replacement Sheets
 Annotated Sheets Showings Changes

REMARKS

Reconsideration and withdrawal of the rejections set forth in the Final Office Action dated September 21, 2005 are respectfully requested.

This communication is in response to the final Office Action dated September 21, 2005. In the Office Action, Claims 1–3, 7–9, 12–14 and 17–19 were rejected under 35 U.S.C. 103(a) as being unpatentable over Worp et al. (U.S. Patent No. 5,136,366) in view of Applicant's Prior Art Figure 1B. In the Office Action, Claims 4, 11, 15 and 21 were rejected under 35 U.S.C. 103(a) as being unpatentable over Worp et al. in view of Applicant's Prior Art Figure 1B and further in view of Fukihura (U.S. Patent No. 5,150,748).

In view of the foregoing amendments and the following remarks, reconsideration of the present patent application is respectfully requested. All of the amendments can be supported by the specification of the present invention, and, therefore, no new matter is introduced.

Independent Claim 1 is maintained and four new independent claims are added to further distinguish the present invention from the admitted prior art and U.S. Patent No. 5,136,366.

Claim 2 has been amended to recite aluminum oxide. The previous amendment of "aluminum" was in error. Other miscellaneous claims have been cancelled.

The following will be dedicated to address claims rejections based on 35 USC § 103(a)

Rejection under 35 USC § 103(a)

The Examiner rejects Claims 1-3, 7-9, 12-14 and 17-19 under 35 USC § 103(a) as being unpatentable over U.S. Patent No. 5,136,366 to Worp et al in view of FIG. 1B of the present application and rejects Claims 4, 11, 15 and 21 under 35 USC § 103(a) as being unpatentable over U.S. Patent No. 5,136,366 to Worp et al in view of FIG. 1B of the present application and further in view of US Patent No. 5,150,748 to Fukihura. The Applicant respectfully disagrees since there are some significant features in the claims of the present application quite distinctive over the above references. The differences existing between

the claims of the present invention and those employed in the references are explained as follows.

In Claim 1, a package assembly for an electronic device is recited. It may be expressly seen that the buffer layer is most characterized in that it has a first part with a first density and a second part with a second density. The Examiner considers that the '366 patent can be read on Claim 1 without paying any attention to the significant feature of Claim 1. The feature of a "first density and second density" cannot be found in the '366 patent. Structurally, Claim 1 is distinctive over the '366 patent. Since this package assembly of Claim 1 is formed by exerting a force onto the electronic device and thus bonding the electronic device to the substrate through the buffer layer, where the buffer layer has the first part disposed horizontally outside the electronic device and thus the first and second densities are formed concurrently, the portions of different densities are naturally formed in the buffer layer.

To the contrary, the buffer layer in the '366 patent is formed by molding, where no force being applied and no portions being formed with different densities owing to the force. Due to the different forming mechanism, the buffer layer of Claim 1 is provided significantly different from that of the '366 patent.

In Claim 22, a package assembly for an electronic device having a lower surface having electrodes thereon, an upper surface and a vertical side with respect to said lower surface is recited. In the claim, the most significant feature is that the buffer layer has a first part and a second part and the first part is lower than the upper surface while higher than the lower surface in altitude. In the '366 patent, the mold (buffer layer) cannot be partitioned into portions in any sense unless the mold which runs through and stays over the electronic device are treated as different portions as compared to the mold between the electronic device and the substrate. However, the first part of Claim 22 exists outside the electronic device with respect to the lower surface of the electronic device, which is significantly different from the mold in the '366 patent. As compared to the '366 patent, the present electronic device can be done without any hole being formed for flowing the mold material, exempting the formation thereof from unnecessary labor and additional cost. In

this regard, the buffer layer not only is structurally distinctive but also outperforms the mold of the '366 patent.

In Claim 23, a package assembly for an electronic device having a lower surface having electrodes thereon, an upper surface and a vertical side with respect to said lower surface is recited. In the claim, the most significant feature is that the buffer layer further forms a shoulder with a first surface disposed alongside the vertical side and a second surface bearing the electronic device at the lower surface and being contacted with the lower surface. Since the buffer layer takes the form of a shoulder having the first and second parts of different heights and orientations that jointly surround closely the electronic device at a corner of the electronic device. This structural feature is significantly distinctive over the mold in the '366 patent, where the mold is restricted within a vertical hole of the electronic device, inherent in the formation of the mold.

In Claim 24, a package assembly for an electronic device having a lower surface having electrodes thereon, an upper surface and a vertical side with respect to said lower surface is recited. In the claim, the most significant feature is that a buffering means and a hermetical sealing means are formed to contact closely with the vertical side and the lower surface of the electronic device, respectively. Due to this configuration, the hermetical sealing means protects the electronic device from moisture entering thereinto from the vertical side. Meanwhile, the buffering means may provide the self-planarization result at the lower surface of the electronic device along with the solders, since the buffering means is an organic or polymer layer. As such, the hermetically sealing means and buffering means provide the sealing function and the self-planarization function concurrently and significantly outperform the mold of the '366 patent, where the mold is formed solely for alignment with respect to the solders so as to enable the electronic device to be planarly disposed without consideration of the hermetical sealing function. Therefore, the '366 patent does not provide teaching for the main technical feature present invention.

In Claim 25, a package assembly for an electronic device similar to that of Claim 1 is recited. Through similar reasoning, this claim could be found patentable.

In Claim 7, the phrase "further comprises" is improper as the claim language is considered. In the amendment, the phrase "further comprising" is used.

In Claim 8, further amendments are made to clarify that the buffer layer has first and second parts.

In Claim 9, the original limitation is replaced with the limitation of the first part, where the first part is higher than the lower surface of the electronic device in altitude, contacted closely with the electronic device and disposed horizontally outside the electronic device.

Based on the above comparisons, it is apparent that the present invention is very distinguishable from the cited references. Thus, it is unobvious for the skilled person to make such an invention. For the foregoing reasons, it is respectfully submitted that the cited references do not disclose, suggest, or render obvious the claimed invention. Accordingly, the claims are patentable over the cited references.

In addition, please add the updated divisional application information in the specification as requested by the Examiner.


In view of the foregoing, the claims pending in the application comply with the requirements of 35 U.S.C. 102 (b) , 103 (a) and patentably define over the applied art. A Notice of Allowance is, therefore, respectfully requested.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 50-0665, under Order No. 386998035US from which the undersigned is authorized to draw.

Dated:

12/9/05

Respectfully submitted,

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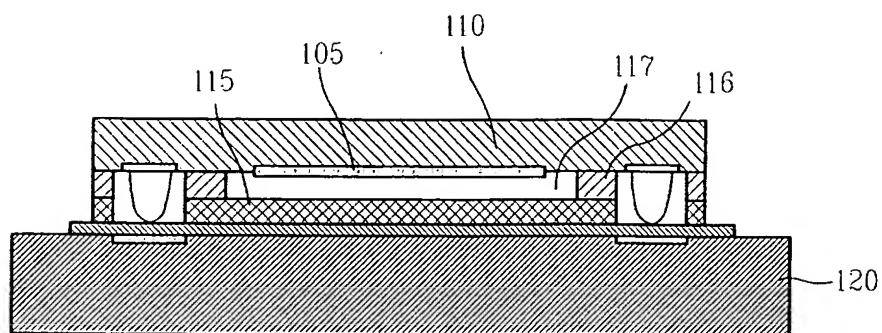


FIG. 1A (Prior Art)

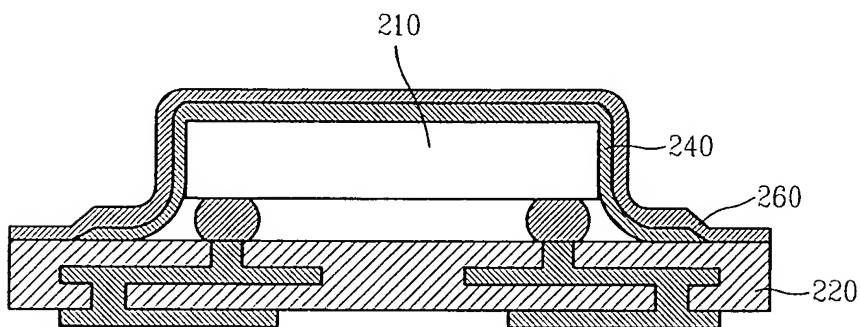


FIG. 1B (Prior Art)

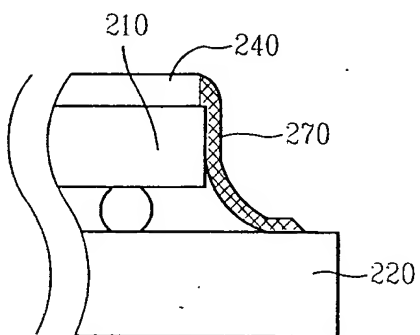


FIG. 1C (Prior Art)

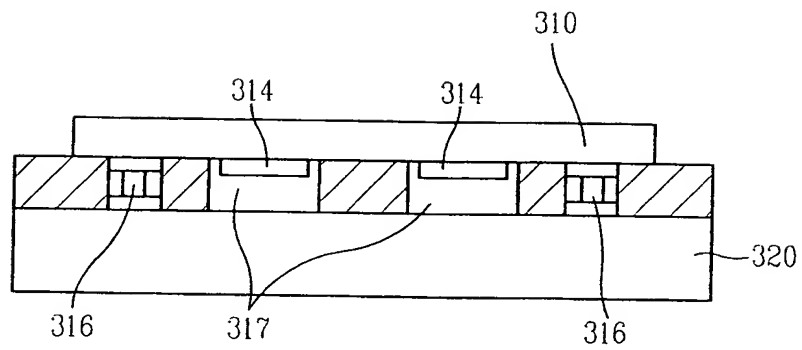


FIG. 1D (Prior Art)

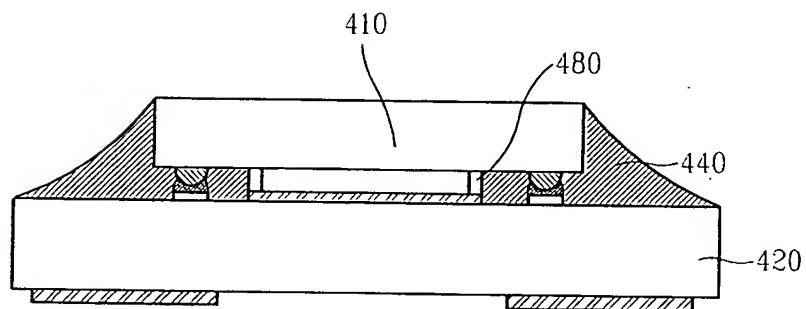


FIG. 1E (Prior Art)

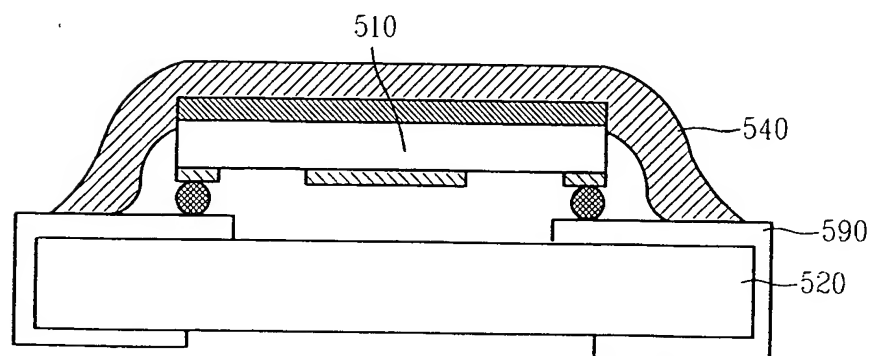


FIG. 1F (Prior Art)

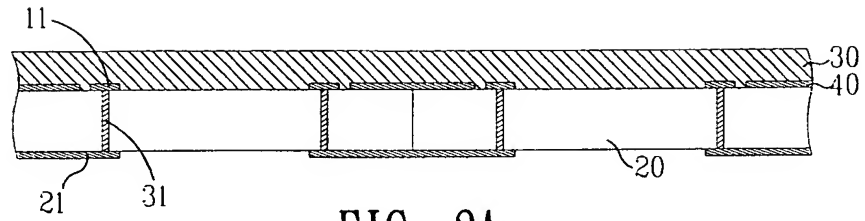


FIG. 2A

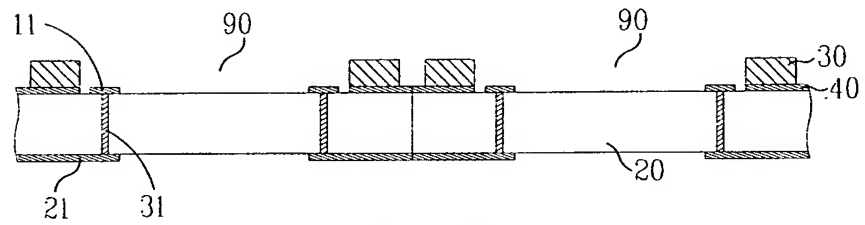


FIG. 2B

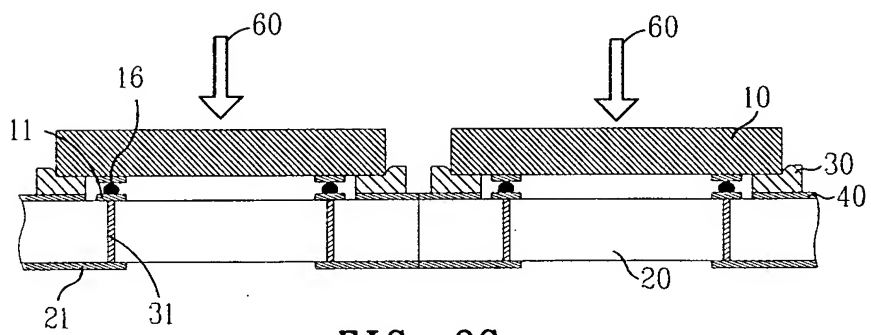


FIG. 2C

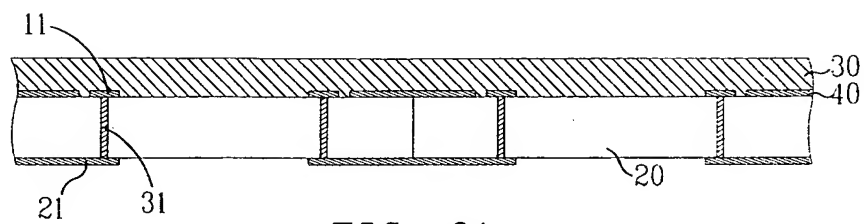


FIG. 3A

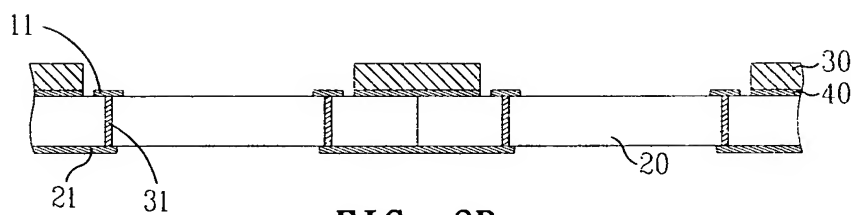


FIG. 3B

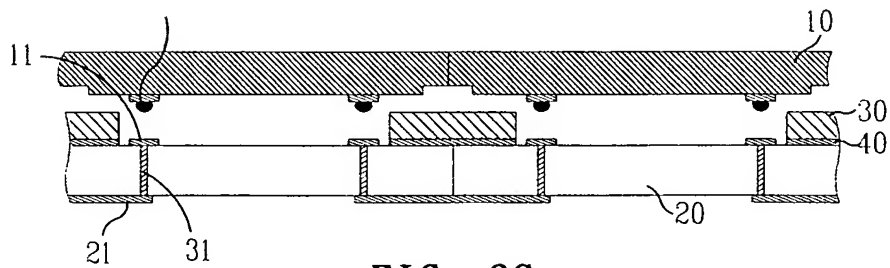


FIG. 3C

